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AUTHOR Spiller, Leroy J.; Hall, Gerald I.
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ABSTRACT

The Nelson-Denny Reading Test was administered to 525 community college students in English courses to determine the relationship between reading test scores, success in English courses, and overall grade point average (GPA) and to examine how expectancy charts could be used to predict which students were likely to experience academic difficulty. Small but significant positive correlations were obtained between reading test scores and grades received in English courses. The reading scores were more highly correlated with cumulative and fall semester GPA than with English course grades. In addition, high school GPA was more highly related to cumulative GPA and fall semester GPA than it was to grades received in English courses. Results from expectancy tables indicated that a reading survey test might have some use in detecting students who may have academic difficulty due to low reading achievement. The results will be used to determine needs and supplemental services for students rather than for screening. If instructors advise students about the success of other students with similar reading achievement levels, students will be able to make better informed choices concerning course selection and support services. (RD)

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READING TESTS AS PREDICTORS OF ACADEMIC SUCCESS IN COMMUNITY COLLEGE ENGLISH COURSES (POL)

by

Leroy J. Spiller & Gerald L. Hall

Delta College

University Center, Michigan

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Reading Tests as Predictors of Academic Success in Community College English Courses

The Nelson-Denny Reading Test was administered to 525 students in English courses to determine (1) the relationship between the test scores and success in English courses and overall GPA, and (2) how expectancy charts could be used to predict students most apt to experience academic difficulty. The results substantiated the wide academic diversity in the community college classroom. Positive but low correlations were found between reading test scores and English grades and GPA. Expectancy charts were relatively able to predict students most apt to experience difficulty. The results will be used to develop supportive services as needed.

As community colleges have increased their "service populations," both in terms of demographic characteristics and previous academic success/experiences, faculty and staff have been faced with increasingly wider ranges of student ability/preparation in the classroom. Because of this, many of the students entering community colleges have relatively poor academic preparation. Many non-traditional teaching techniques and educational services have been tried, with varying degrees of success, to assist these students in being successful in the classroom.

However, in order to provide the additional assistance or services which may be needed, it is first necessary to identify the students likely to have academic problems. Further, this identification needs to be accomplished before the students meet failure, since adding a new failure to a previous lack of academic success just reinforces for many students an "I can't do it" syndrome.

Delta has eliminated "remedial" programs and attempted to develop programs of assistance devoid of the stigma of "bonehead" courses. The concept of a Teaching Learning Center (TLC) where tutorials, workshops, and specialized courses are available to all students no matter what their needs or level or preparation is one major aspect of the non-remedial orientation of Delta.

Still, assistance before failure is often difficult. Many students who have experienced poor academic success in the past are hesitant to approach the teacher for help and are often leery of a service such as the TLC. They can not be forced to seek assistance. They can only be advised to do so.

In the area of English, Delta like other schools, has relied upon past academic performance in terms of GPA and English grades to counsel students about English courses. However, Delta's avoidance of the remediation pattern extends to the English course offerings. There are no longer any sub-Freshman level, zero credit English courses. All students take the same basic English courses unless specific alternatives are required by the student's curriculum. Those students who have low grades in their past English classes or low GPA's are advised to register for the regular composition course plus a tutorial taught by the same instructor. This combination has a value of five credit hours. Those who can

not or will not select this option are encouraged to make use of the TLC opportunities. A reading course is also available and suggested for some students.

Language proficiency, especially reading and writing, is necessary for success in most academic areas. Unfortunately, many students face the dual challenge of improving their language proficiency at the same time that they need high levels of proficiency to succeed in their other course work. Perhaps curriculum modification could be a partial answer to this problem, but it is certain that lack of language proficiency as measured by failure in initial English courses may portend failure in other areas, or worse dropping out of school.

The English Division at Delta College recognized this problem and conducted a study to determine predictors of success in English. One of the possible predictors investigated was standardized reading tests. The objective of that portion of the study were to determine (1) the relationship between reading test scores and grades in English courses, (2) the relationship between reading test scores and grade point averages, and (3) expectancies of success in English courses based on reading levels at the time they entered the course.

After a review of the literature on reading tests, the Nelson-Denny Reading Test (1973 Revision) was selected as the standardized test most appropriate for Delta College students. The Nelson-Denny was chosen because its norms were established using the scores of both community college and university level students, gave results by comprehension and vocabulary as well as combined scores, had been satisfactorily used by some Delta English faculty, came with a good interpretation manual, and was easily administered and scored. The Division may decide to try other types of tests if not satisfied with the Nelson-Denny, but at the time it was viewed as the best available test for our needs.

The full-time faculty members of the English Division were contacted concerning possible participation in the study. Sixteen faculty volunteered to participate and the test was administered to their students during the regular class period. The test was administered during the third and fourth weeks of the semester. Tests were administered and scored by Teaching/Learning Center and Testing Center staff, and individual scores were reported back to the individual students. Only grouped data was reported to the faculty. This was done to assure the students that their scores would not in any way influence their course grade. The students in the sample consisted of the following:

Female:	229	Composition Classes (34):	434
Male:	282	Other English Classes (8):	91
Not Specified:	14	Total Classes (42):	525
Total	525		

The reading test raw scores were converted to Percentile and Grade Equivalent scores for the Vocabulary and Comprehension subtest and for the Total (Comprehension and Vocabulary combined) reading level.

The next step in the study was to determine the relationship between the reading survey scores and the students' academic performance. This was accomplished by (1) correlating the student's performance on the reading survey with their grade in the English course taken during Fall Semester, 1976, and their cumulative GPA, and (2) developing expectancy charts for grades received as related to reading survey scores.

Results

The results substantiated the wide academic diversity in the community college classroom. Approximately 30% of the students scored on the reading test as well as or better than the average student in 14th grade (sophomore level), while on the other end 15% are reading below the 9th grade level.

Correlations (Pearson product-moment r) were run between each of the following variables:

Age	Grade in English Class Fall Semester
Vocabulary Score	GPA -- Cumulative
Comprehension Score	GPA -- Fall Semester
Total Score	High School GPA
Reading Speed Score	Grade in English Course Emphasizing Literature

Correlations were run only on those pairs of data in which each score was available. If one or both scores were not available, that individual was not included in the analysis. Raw scores for the reading tests were converted to Percentile Scores to use in the correlations.

Below are several selected correlations of interest to this study:

Table 1

English Grade Correlated with:	r
Total Percentile	.27**
High School GPA	.27**
Vocabulary Percentile	.26**
Comprehension Percentile	.21**
Reading Speed Percentile	.11**
Cummulative GPA correlated with:	
High School GPA	.45**
Total Percentile	.37**
Vocabulary Percentile	.34**
Comprehension Percentile	.33**
Reading Speed Percentile	.14**
Fall Semester GPA with:	
High School GPA	.41**
Total Percentile	.40**
Vocabulary Percentile	.37**
Comprehension Percentile	.34**
Reading Speed Percentile	.15**

*Significant beyond .05 level
**Significant beyond .01 level

As can be seen from the these correlations, there is a positive relationship (r=.11 to r=.27) between the reading test scores and grades received in the English courses, although a relatively small one. Vocabulary, Comprehension and Total Percentile scores have the highest relationship, with Reading Speed having a significantly lower relationship with English grade.

The reading scores correlate higher with the students' cumulative GPA and with their Fall Semester GPA than with the English grades (r=.14 to r=.40). Also, High School GPA was more highly related to students cumulative GPA and Fall Semester GPA than it was to the grades they received in the English courses.

One factor that might have influenced the relatively low magnitude of the correlations is that the English courses used in the sample were primarily courses emphasizing composition rather than reading. When correlating the reading test scores with English 112 grades - a course which emphasizes reading and interpretation of literature, the range increased somewhat. The range for English 112 with Vocabulary, Comprehension and Total scores was from r= .28 to r= .35, closer to the range for GPA in general. Reading Speed still correlated very low; r= .13. As might be expected, the more important role reading plays in a course, the better the reading test scores correlate with the course grades.

Several factors may be responsible for the relatively low correlations between English grades and reading survey scores. W grades are not included in the correlations, because we do not know whether those students would have received a high grade or low grade in the course. If students elected to withdraw from a course in which they were receiving a low grade, this could decrease the size of the correlations, since a proportionately greater number of students with low reading survey scores withdrew from the English courses (see next section). Another factor is that, if W's are excluded, few of the students (approximately 8%) received grades below a C, which would act to keep the correlations low by restricting the range of the scores. As it is, the reading survey scores "explain" only approximately 10% of the variance in the grades, leaving 90% to be accounted for (explained) by other factors.

For the present study the correlations between the reading scores and English grades is less important than how well the reading scores predict those students likely to have problems in their course work. In order to determine this, expectancy charts were developed based on Reading Survey Total scores and grades earned at Delta. A, B, and C grades were defined as "successful" and D, E, and W grades were defined as "non-successful." Table 2 below presents this relationship.

Table 2

Successful vs Non-Successful in English Course

Percentile Total Score	Successful	Non-Successful
80-99%ile	90%	10%
60-79%ile	91%	9%
40-59%ile	87%	13%
20-39%ile	82%	18%
1-19%ile	74%	26%

As can be seen from Table 2, students falling between the 1st and 19th percentile had two and one half times the probability of receiving a non-successful grade as a student scoring at the 60th percentile or higher. One out of four persons in the lowest percentiles received a non-successful grade, compared to only one out of ten in the higher percentiles.

Again, the trend was for the student with higher Reading Survey scores to have higher cumulative GPA's, although a number of students with low Reading Survey scores do have high GPA's and vice versa. Table 3 below combines GPA's above 2.0 (defined as "successful") and below 2.0 (defined as "non-successful").

Table 3

Successful vs Non-Successful in Cumulative GPA, Fall 1976

Percentile Total Score	Successful	Non-Successful
80-90%ile	89%	11%
60-79%ile	89%	11%
40-59%ile	84%	16%
20-39%ile	75%	25%
1-19%ile	65%	35%

As can be seen from Table 3 above, a student falling below the 20th percentile had about three times the chance of having a GPA below 2.0 than a student above the 60th percentile. Approximately one out of three students below the 20th percentile had a "non-successful" GPA.

At the end of Fall semester 1977 (one year later) an examination was made of the subjects' grade point averages. This allowed them another year of college work. Table 4 below presents the GPA's above 2.0 (defined as "successful") and those below 2.0 (defined as "non-successful").

Table 4

Successful vs Non-Successful in Cumulative GPA, Fall 1977

Percentile Total Score	Successful	Non-Successful
80-90%ile	90%	10%
60-79%ile	79%	21%
40-59%ile	77%	23%
20-39%ile	70%	30%
1-19%ile	50%	50%

By comparing Tables 3 and 4, it can be seen that the success rate for those students ranked above the 80th percentile remained stable. However, those below the 80th percentile did progressively more poorly, particularly at the lowest ends. They increased their rate of non-success from 5 to 15 percent. (Perhaps the demands of reading in higher level courses affected this lack of success. It seems that students scoring poorly on the test did not improve enough on their own to succeed in subsequent classes. Thus, while they were successful at first, many

dropped into the unsuccessful range after they had been in college longer.) One year after the study approximately one half of those below the 20%ile had a GPA below 2.0. Students at the low end of the reading scale (below 20%ile) had five times the chance of an unsuccessful GPA compared to students at the high end of the scale (80%ile).

Therefore, these results from the expectancy tables seem to indicate that a reading survey test such as the Nelson-Denny may have some use in detecting those students who may have academic difficulty, due to low reading achievement.

Overall, the range of correlations was similar to the range reported by Levin and Leake in the April, 1977 issue of Forum For Reading.[1] At Blue Ridge Community College in Virginia the correlations ranged from a low of -.02 for reading rate to a high of .43 for vocabulary.

The results will be used to determine needs and supplemental services for students. The results will not be used for screening processes. Thus instructors could advise their students about the success of other students whose reading level was the same as their level of achievement. Because of this a student could make a better informed choice concerning course selection and support services.

This study has provided only part of the information needed to assist students in making the most effective use of the opportunities available to them. However the test scores do provide an initial "flag" of those students likely to experience difficulty in their course work because of low reading ability.

The English Division views this study as part of a three year program of research, review of literature in the field, and possible modification of pedogogy, curriculum, and support services. The English Division of Delta College wants to continue to do its part to make the promise of the open door community college a reality.[2]

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[1]Bernard H. Levin and Lloyd A. Leake, "The Nelson-Denny Test As A Predictor of Community College English And Psychology Grades," Forum For Reading, Vol. 6, No. 2 April, 1977.

[2]As a secondary part of the study, information was sought about retention of students in school. Twenty-eight percent below the 10th grade level were still here as of winter semester, 1978, while forty-four percent at the 10th grade level and above were still here two years later. (In general, this was the earliest semester most students in the survey could complete four semesters of work. Others may have finished early or "stopped out" for some reason beyond academic considerations. Thus this is a gross measure of retention, but it does indicate that students with higher reading levels had a significantly greater chance of remaining in school.)